

Taking Account...

BEA Working Paper Links Measures of R&D Spending

As BEA continues to move toward producing a research and development (R&D) satellite account, BEA economist Carol Robbins has contributed an important theoretical building block to the process.

In a recent BEA working paper, Robbins translated R&D data gathered according to the *Frascati Manual*—the approach recommended by the Organisation for Economic Co-operation and Development—into the framework recommended by the *System of National Accounts* (SNA), the economic accounting guidelines promulgated by the United Nations.

With few exceptions, BEA's methodology for compiling its national income and product accounts (NIPAs) is consistent with the SNA. Thus, by linking the Frascati approach and the SNA approach, R&D activity can be more clearly defined and discussed in economic terms consistent with the NIPAs.

The paper provides a useful alternative view of the economic impact of R&D activity and hits upon key issues in the construction of an account aimed at measuring the impact of R&D on the economy. Such issues include various definitions of the range of activities that should be included as R&D, the nature of

R&D economic transactions, and the characterization of R&D as both a market and nonmarket good. The paper also argues that closer alignment between the R&D data currently collected on a *Frascati Manual* basis and the *System of National Accounts* will improve measures of the increasingly important international flows in R&D services.

To bridge the two systems, Robbins' paper classifies *Frascati Manual*-based spending by economic purpose, separating current expenditures from capital formation and sorting expenditures into the sectors used in the SNA. In addition, exports and imports of R&D are presented to obtain the component of R&D expenditures that are used domestically.

The resulting accounts provide the working definitions and output measures for the creation of the R&D satellite account that BEA is scheduled to produce, beginning with a preliminary account in 2006. This account will be produced in conjunction with the National Science Foundation.

The production of the R&D satellite account will require several additional steps that are beyond the scope of Robbins' paper. Also, additional conceptual questions must be addressed before R&D activity can be capitalized in the NIPAs.

These questions include identifying the ownership of capitalized R&D and estimating appropriate rates of return and consumption of fixed capital for R&D. Also, in order to develop constant-cost estimates of R&D capital stock, R&D deflators must be identified and created.

You can view the paper on BEA's Web site, <www.bea.gov>, by clicking on "Papers and Working Papers" and then clicking on "BEA Working Papers."

Updated GSP Time Series Available on BEA Web Site

Updated gross state product (GSP) estimates for 1963–76 are now available online. This data series replaces experimental estimates that were last published in 1988.

The updated estimates are based on current concepts, methods, and data and on the Standard Industrial Classification (SIC) system. The release of these updated estimates is a first step toward accomplishing one of BEA's Strategic Plan objectives: Addressing data users' need for lengthier time series. Users of BEA's GSP estimates—econometric modelers and government budget forecasters, for example—have long requested GSP data for years prior to 1977. The data is now available on BEA's Web site at <www.bea.gov/bea/regional/gsp.htm>.